



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
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D350-748-203
Job Sheet 191001



Part No: D350-748-203

Job Qty: 1 pcs

Part Name: AS350 / AS355 Stainless Steel Aft Crosstube



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/20/19

Job Tracking No:

Due Date: 3/29/19

Created By: Jesse White

Type: Stock

Description: SIOP

Note: D350-748-243 REV:A IPP REV:A 15.03.23 NEW ISSUE DD VERF;JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup	Run	Workcenter / Supplier	Lead Time	
					Hrs	Hrs			
110	Crosstubes - Bend - 1	1 pcs	3/29/19	3/29/19	0.00	2.44	Crosstubes - Bend		GPDB 19-05-22
120	Crosstubes - 2 - B4B	1 pcs	3/29/19	3/29/19	0.00	2.19	Crosstubes - 1 - B4B		N/D
							Crosstubes - 2 - B4B		
							Crosstubes - 3 - B4B		
							Crosstubes - 4 - B4B		
127	QC 15	1 pcs	3/29/19	3/29/19	0.00	0.00	QC 15 - 12		
							QC 15 - 3		
							QC 15 - 47		
							QC 15 - 49		
							QC 15 - 58		
							QC 15 - 9		
128	Crosstubes - 3 - B4B	1 pcs	3/29/19	3/29/19	0.00	1.98	Crosstubes - 1 - B4B		DAS 68
							Crosstubes - 2 - B4B		9-89
							Crosstubes - 3 - B4B		BB 5/27/2019
							Crosstubes - 4 - B4B		
130	Crosstubes - 4 - B4B	1 pcs	3/29/19	3/29/19	0.00	2.89	Crosstubes - 1 - B4B		
							Crosstubes - 2 - B4B		
							Crosstubes - 3 - B4B		GP 19-05-29
							Crosstubes - 4 - B4B		
140	QC 5	1 pcs	3/29/19	3/29/19	0.00	0.00	QC 5 - 10		
							QC 5 - 12		
							QC 5 - 17		
							QC 5 - 18		
							QC 5 - 19		
							QC 5 - 22		
							QC 5 - 24		
							QC 5 - 3		
							QC 5 - 42		
							QC 5 - 43		
							QC 5 - 49		
							QC 5 - 51		

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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____		Sequence #: _____		QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation				Disposition			
				Completed By			
				Lead hand / Supervisor			
				QC / QA Coordinator			
				FAULT CATEGORY			
				☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			

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Container No: \$182796



Part: D350-748-203

Job No: 191001

Serial No/Batch: \$182796

Revision: A

Inspector:

Exp Date:

Instructions: TC STC SH06 - 27 Issue 2 Ref: FA-0516 SR02359NY 11/03/04, EASA S

				QC 5 - 58		
				QC 5 - 68	MAY 30 2019	DAS 68 9-89
				QC 5 - 9		
				QC 5 - 50		
				QC 5 - 30		
174 Outsource	1 pcs	3/29/19		SKY002-VC		2019-05-30
176 Packaging 2-1 - Receive - B4B	1 pcs	3/29/19	0.00 0.00	Packaging 2 - 1 - B4B		
				Packaging 2 - 2 - B4B		
				Packaging 2 - 3 - B4B		
				Packaging 2 - 5 - B4B		
				Packaging 2 - 4 - B4B		
				Packaging 2 - 6 - B4B		
				Packaging 2 - 7 - B4B		
				Packaging 2 - 8 - B4B		
				Packaging 2 - 9 - B4B		
				Packaging 2 - 10 - B4B		
				Packaging 2 - 11 - B4B		
				Packaging 2 - 12 - B4B		
				Packaging 2 - 13 - B4B		
				Packaging 2 - 14 - B4B		
				Packaging 2 - 15 - B4B		
				Packaging 2 - 16 - B4B		
				Packaging 2 - 17 - B4B		
				Packaging 2 - 18 - B4B		
				Packaging 2 - 19 - B4B		
				Packaging 2 - 20 - B4B		
				Packaging 2 - 21 - B4B		
				Packaging 2 - 22 - B4B		
				Packaging 2 - 23 - B4B		
				Packaging 2 - 24 - B4B		
				Packaging 2 - 25 - B4B		
				Packaging 2 - 26 - B4B		
				Packaging 2 - 27 - B4B		
				Packaging 2 - 28 - B4B		
				Packaging 2 - 29 - B4B		
				Packaging 2 - 30 - B4B		
				Packaging 2 - 31 - B4B		
				Packaging 2 - 32 - B4B		
				Packaging 2 - 33 - B4B		
				Packaging 2 - 34 - B4B		
				Packaging 2 - 35 - B4B		
				Packaging 2 - 36 - B4B		
178 QC 6	1 pcs	3/29/19	0.00 0.00	QC 6 - 42		
				QC 6 - 9		
				QC 6 - 68	JUN 03 2019	DAS 68 9-89
				QC 6 - 61		
180 Spray Paint - 2 - B4B	1 pcs	3/29/19	0.00 1.07	Spray Paint - 1 - B4B		2019-6-2
				Spray Paint - 2 - B4B		
				Spray Paint - 3 - B4B		
				Spray Paint - 4 - B4B		
190 QC 14	1 pcs	3/29/19	0.00 0.00	QC 14 - 15		
				QC 14 - 2		
				QC 14 - 34		
				QC 14 - 41		
				QC 14 - 51		
				QC 14 - 58		
				QC 14 - 59		
				QC 14 - 9		
				QC 14 - 68	JUN 10 2019	DAS 68 9-89

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QSI042)	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor		
			QC / QA Coordinator		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

193	Outsource - 11 - Paint	1 pcs	3/29/19		ATE003-VC	5	NR
195	Packaging 2-1 - Receive - B4B	1 pcs	3/29/19	0.00 0.00	Packaging 2 - 1 - B4B		
					Packaging 2 - 2 - B4B		
					Packaging 2 - 3 - B4B		
					Packaging 2 - 5 - B4B		
					Packaging 2 - 4 - B4B		
					Packaging 2 - 6 - B4B		
					Packaging 2 - 7 - B4B		
					Packaging 2 - 8 - B4B		
					Packaging 2 - 9 - B4B		
					Packaging 2 - 10 - B4B		
					Packaging 2 - 11 - B4B		
					Packaging 2 - 12 - B4B		
					Packaging 2 - 13 - B4B		
					Packaging 2 - 14 - B4B		
					Packaging 2 - 15 - B4B		
					Packaging 2 - 16 - B4B		
					Packaging 2 - 17 - B4B		
					Packaging 2 - 18 - B4B		
					Packaging 2 - 19 - B4B		
					Packaging 2 - 20 - B4B		
					Packaging 2 - 21 - B4B		
					Packaging 2 - 22 - B4B		
					Packaging 2 - 23 - B4B		
					Packaging 2 - 24 - B4B		
					Packaging 2 - 25 - B4B		
					Packaging 2 - 26 - B4B		
					Packaging 2 - 27 - B4B		
					Packaging 2 - 28 - B4B		
					Packaging 2 - 29 - B4B		
					Packaging 2 - 30 - B4B		
					Packaging 2 - 31 - B4B		
					Packaging 2 - 32 - B4B		
					Packaging 2 - 33 - B4B		
					Packaging 2 - 34 - B4B		
					Packaging 2 - 35 - B4B		
197	QC 6	1 pcs	3/29/19	0.00 0.00	QC 6 - 42		
					QC 6 - 9		
					QC 6 - 68		
					QC 6 - 61		
200	Crosstubes - 5 - B4B	1 pcs	3/29/19	0.00 2.89	Crosstubes - 1 - B4B		RD 17-6-22
					Crosstubes - 2 - B4B		
					Crosstubes - 3 - B4B		
					Crosstubes - 4 - B4B		
210	QC 5	1 pcs	3/29/19	0.00 0.00	QC 5 - 10		
					QC 5 - 12		
					QC 5 - 17		
					QC 5 - 18		
					QC 5 - 19		
					QC 5 - 22		
					QC 5 - 24		
					QC 5 - 3		
					QC 5 - 42		
					QC 5 - 43		
					QC 5 - 49		
					QC 5 - 51		
					QC 5 - 58		
					QC 5 - 68		
					QC 5 - 9		

DAS
JUN 24 2019 68
9-89

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

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Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

				QC 5 - 50	
				QC 5 - 30	
220 Packaging 1-1 - Pick Kit - B4B 1 pcs	3/29/19	0.00 0.00	Packaging 1 - 1 - B4B		
			Packaging 1 - 2 - B4B		
			Packaging 1 - 3 - B4B		
			Packaging 1 - 4 - B4B		
			Packaging 1 - 5 - B4B	DAS	
			Packaging 1 - 6 - B4B	28	
			Packaging 1 - 7 - B4B	9-89	
			Packaging 1 - 8 - B4B		
			Packaging 1 - 9 - B4B		
			Packaging 1 - 10 - B4B		
			Packaging 1 - 11 - B4B		
			Packaging 1 - 12 - B4B		
			Packaging 1 - 13 - B4B		
			Packaging 1 - 14 - B4B		
			Packaging 1 - 15 - B4B		
			Packaging 1 - 16 - B4B		
			Packaging 1 - 17 - B4B		
			Packaging 1 - 18 - B4B		
			Packaging 1 - 19 - B4B		
			Packaging 1 - 20 - B4B		
			Packaging 1 - 21 - B4B		
			Packaging 1 - 22 - B4B		
			Packaging 1 - 23 - B4B		
			Packaging 1 - 24 - B4B		
			Packaging 1 - 25 - B4B		
			Packaging 1 - 26 - B4B		
			Packaging 1 - 27 - B4B		
			Packaging 1 - 28 - B4B		
			Packaging 1 - 29 - B4B		
			Packaging 1 - 30 - B4B		
			Packaging 1 - 31 - B4B		
			Packaging 1 - 32 - B4B		
			Packaging 1 - 33 - B4B		
			Packaging 1 - 34 - B4B		
			Packaging 1 - 35 - B4B		
			Packaging 1 - 36 - B4B		
230 QC 4 1 pcs	3/29/19	0.00 0.00	QC 4 - 26		
			QC 4 - 28		
			QC 4 - 42		
			QC 4 - 58	Sm MB 07/03/20 19	
			QC 4 - 6		
			QC 4 - 69		
			QC 4 - 9		
			QC 4 - 46		
240 Packaging 3-1 - Stock - B4B 1 pcs	3/29/19	0.00 0.00	Packaging 3 - 1 - B4B		
			Packaging 3 - 2 - B4B		
			Packaging 3 - 3 - B4B		
			Packaging 3 - 4 - B4B		
			Packaging 3 - 5 - B4B		
			Packaging 3 - 6 - B4B		
			Packaging 3 - 7 - B4B	Sm MB 07/03/20 19	
			Packaging 3 - 8 - B4B		
			Packaging 3 - 9 - B4B		
			Packaging 3 - 10 - B4B		
			Packaging 3 - 11 - B4B		
			Packaging 3 - 12 - B4B		
			Packaging 3 - 13 - B4B		
				Plex 2/20/19 1:37 PM dart.white.jesse	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor		
			QC / QA Coordinator		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
245 DC - 1 - B4B	1 pcs	3/29/19	0.00 0.00	DC - 1 - B4B	
				DC - 2 - B4B	
250 QC 21 - FG	1 pcs	3/29/19	0.00 0.00	QC 21 - FG - 21	
				QC 21 - FG - 70	
				QC 21 - FG - 53	

Part Op 110 - CNC Alpha 160 Bender - Bend tube as per Dwg D350-748-243 using CNC bender program D350A and Folio
 Descriptions: FT *****UNDER BEND .225" PER SIDE*****USE (4) DT9824 SHIM BLOC TO CHECK STRAIGHTNESS*****

120 - Crosstubes ****VERIFY CROSSTUBE DIMENSIONS AS PER DWG****

127 - QC15- Crosstube Dimensional Check ***MARK CUT LINES***

128 - Crosstubes - CUT TUBE AT HEIGHT ON FAI SHEET VERF HEIGHT _____ BY QC 15 LEVEL INSPECTOR

TWIST - 0,000

130 - Crosstubes - 1- Drill Tube as per Dwg D350-748-243 Using DT8876 Drill Jigs, set-up drill table as per QSI 010. 2- Debur 3- Engrave Part # and Batch # as per Dwg D350-748-243 4- Remove all marks from tube within limits of D350-748-243

140 - QC5- Inspect part completeness to step on W/O

174 - ISSUE P/O TO SKY SERVICE: _____

176 - Receive & Inspect for Damage & Mat'l Certs

178 - QC6- All purchased or subcontracted products

180 - Spray Paint / NDT Room ***VERIFY BY _____ BATCH # TO MATCH W/O _____ ***MASK

SCRIBE B# & P# AND VERIFY*** 1. Apply Axalta 13205S Cleaner inside and outside crosstube per QSI 005 4.1.4

BATCH: 138949 2. Axalta 230S Metalok inside and outside crosstube per QSI 005 4.1.4 BATCH: 1380213.

Prime inside and outside crosstube per QSI 005 4.2 BATCH: 515437 4. Paint outside of crosstube per QSI 005 4.2

BATCH: 5184740

190 - QC14- Inspect Spray Paint - Then, Wrap in plastic bag to protect from scratches ***VERIFY BY _____ BATCH # TO MATCH W/O _____

193 - outsourced Paint ISSUE P/O: _____ 1. Apply Axalta 13205S Cleaner inside and outside crosstube

per QSI 005 4.1.4 BATCH: _____ 2. Axalta 230S Metalok inside and outside crosstube per QSI 005 4.1.4 BATCH: _____

3. Prime inside and outside crosstube per QSI 005 4.2 BATCH: _____ 4. Paint outside of crosstube per

QSI 005 4.2 BATCH: _____ C OF C IS REQUIRED

200 - Crosstubes - INSTALL GROUND WIRE INSERT, THEN INSERT SCREW AND WASHER ***LIMIT AIR PRESSURE

TO 50 PSI WHEN INSTALLING AETC-1032 INSERT AND ONLY EXPAND INSERT ONCE*** 1-Abrade mating surfaces

of support and crosstube with 180 grit sandpaper, clean the area with MEK or equivalent as per dwg 2-Install supports

with Proseal 890 per D350-748-243 and QSI 015 A/R Proseal 890 Batch: 5176610 EXP: 19-10 3-

Install supports clamps Using Dt8876 as per Dwg D350-748-243, Torque to 60-80 IN-LBS. PROSEAL CURE TIME 72

HOURS: Start: 19-6-22 Finish: 19-6-25

210 - QC5- Inspect part completeness to step on W/O ***RE-CHECK TORCQUE ON CLAMP AFTER PROSEAL HAS

CURED FOR 72HOURS AS PER DWG.*** **VERIFY BY _____ BATCH # TO MATCH W/O _____

220 - Pick Kit

230 - QC4- 100% Inspect kits for completeness ***VERIFY BY _____ BATCH # TO MATCH W/O

240 - Identify and pack for shipping as per PPPD350-748-203 Location: FB PPP Rev: _____

245 - Document Control - Photocopy bluefile & type labels per PPPD350-748-203 CHG001

250 - QC21- Final Inspection - Work Order Release

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

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Date :	Sequence #:	QTY Affected :	MRB (QSI042)		
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled		FAULT CATEGORY ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

010650

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D350-748-243TRN	Crosstube Installation, High Aft	1 pcs (1 ea)	110-Crosstubes - Bend - 1	5162074
AETC-1032	Insert	1 Ea (1 ea)	200-Crosstubes - 5 - B4B	
D3502-1	Support	2 Ea (2 ea)	200-Crosstubes - 5 - B4B	
D5123-7	Clamp Cushion	2 pcs (2 ea)	200-Crosstubes - 5 - B4B	
MS21920-20	Clamp	2 Ea (2 ea)	200-Crosstubes - 5 - B4B	
NAS1149C0363R	Washer	1 Ea (1 ea)	200-Crosstubes - 5 - B4B	
MS51958-63	Screw	1 pcs (1 ea)	200-Crosstubes - 5 - B4B	
AN4-41A	Bolt	8 Ea (8 ea)	220-Packaging 1-1 - Pick Kit - B4B	5058981
AN4-6A	Bolt	16 Ea (16 ea)	220-Packaging 1-1 - Pick Kit - B4B	5163234
AN5-32A	Bolt	4 Ea (4 ea)	220-Packaging 1-1 - Pick Kit - B4B	5058983
D3500-1	Saddle	4 pcs (4 ea)	220-Packaging 1-1 - Pick Kit - B4B	5133673
D3501-1	Bushing	16 pcs (16 ea)	220-Packaging 1-1 - Pick Kit - B4B	5178115
MS21042L4	Nut	24 Ea (24 ea)	220-Packaging 1-1 - Pick Kit - B4B	5157064
MS21042L5	Nut	4 Ea (4 ea)	220-Packaging 1-1 - Pick Kit - B4B	5181786
NAS1149D0463J	Washer	32 Ea (32 ea)	220-Packaging 1-1 - Pick Kit - B4B	5174671
NAS1149D0563J	Washer	8 Ea (8 ea)	220-Packaging 1-1 - Pick Kit - B4B	5174288

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
110-Crosstubes - Bend - 1	D350-748-243TRN	1	0	0
200-Crosstubes - 5 - B4B	AETC-1032	① 5137335	19	0
	D3502-1	② 5138461	0	0
	D5123-7	② 5163264	255	0
	MS21920-20	② 5107593	111	0
	MS51958-63	① 5104462	46	0
	NAS1149C0363R	① 5131423	628	0
220-Packaging 1-1 - Pick Kit - B4B	AN4-41A	8	337	0
	AN4-6A	16	654	0
	AN5-32A	4	409	0
	D3500-1	4	59	0
	D3501-1	16	241	0
	MS21042L4	24	2,383	0
	MS21042L5	4	777	0
	NAS1149D0463J	32	3,271	0
	NAS1149D0563J	8	1,320	0

Part Specifications

Specifications could not be found.

Plex 2/20/19 1:37 PM dart.white.jesse

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

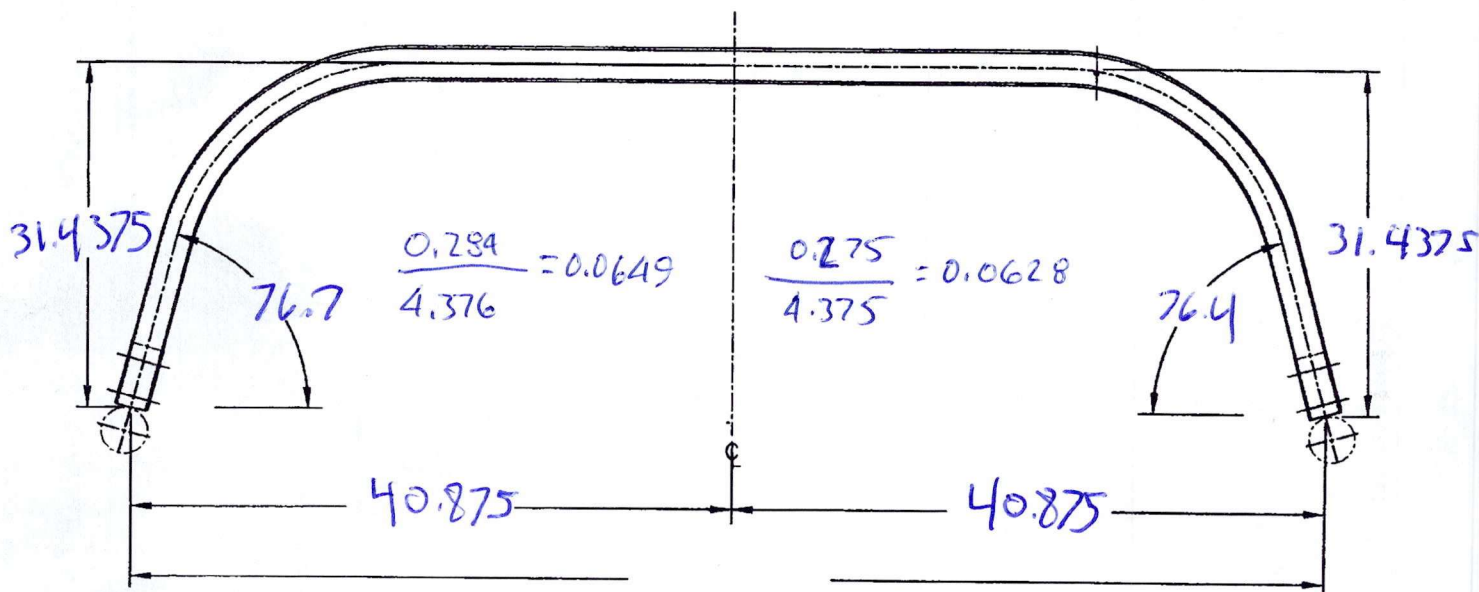
NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor		
			QC / QA Coordinator		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

DART AEROSPACE LTD		Work Order:	
Description: Crosstube High Aft, SS (AS350/355)		Part Number:	D350-748-203
Inspection Dwg: D350-748-243	Rev: A		Page 1 of 1

Required Dimension	Min	Max
Height	31.10	31.60
1/2 Span	40.77	41.03
Angle	75	77
Total Span	81.54	82.06
Bending Passes	7	--
Crushing	--	8%
Twist	--	0.38



	Side A	Side B
Bending Passes		
Crushing	6.5%	6.3%
Comments		

2.046
2.330

2.050
2.325

QC15 Inspection	
Date	

Rev	Date	Change	Revised by	Approved
A	15.09.09	New Issue	KJ	

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
				QC / QA Coordinator	
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					

Item	Qty -243	Part Number	Description
1	X	D350-748-243	CROSSTUBE ASSEMBLY (AS 350/355 HI AFT)
2	1	D6021-125	CROSSTUBE
3	2	D3502-1	SUPPORT
4	2	D5123-7	CLAMP CUSHION
5	1	AETC-1032	INSERT
6	2	MS21920-20 OR MS21920-21/-22	CLAMP (PER DART SPEC. M-MS21920-20/-21/-22)
7	1	NAS1149C0363R	WASHER (OR AN960C10)
8	1	NAS1635-3-8	SCREW (OR MS51958-63)
9	A/R	PROSEAL 890 B-2	SEALANT, AMS-S-8802 CLASS B-2

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6021-125
FINISHED LENGTH AFTER TURNING = 124.70±0.06 (AFTER BENDING/TRIMMING = 122.70 REF)
- 2) FINISH: PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCE: PER DART QSI 018 UNLESS OTHERWISE NOTED.
WALL THICKNESS ECCENTRICITY PER DART QSI 038 7.2
MIN. ALLOWABLE WALL IS -0.020 FROM NOMINAL
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: DART PART NUMBER "D350-748-243" AND BATCH NUMBER ON INSIDE OF CUFF
PER DART QSI 044 6.4 (VIBRATING STYLUS)
- 7) WEIGHT: 29.85 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE, EXCEPT FOR Ø0.290 HOLE.
- 9) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO CRACKING/CHIPPING/GROOVES.

TURNING

- 10) BLEND OUT ALL EDGES FROM MACHINING LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH. NOTE: ALL HOLES ARE DRILLED AFTER BENDING.

BENDING

- 11) BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES PER SIDE. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D. ON TOP HALF OF BEND, AND 8% ON BOTTOM HALF OF BEND.
- 12) MAX AMPLITUDE OF RIPPLING ALONG BENT PORTION OF THE TUBE IS 0.030 (ZN A1-3)
- 13) MAX TWIST: WITH XTUBE LAYED FLAT ON SURFACE, THE DIFFERENCE BETWEEN CUFF HEIGHTS FROM THE SURFACE MAY BE NO LARGER THAN 0.38 (ZN C1-3).

ASSEMBLY

- 14) TO INSTALL D3502-1 SUPPORT: ABRASE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.02" TO 0.05" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 15) TORQUE CLAMPS 80 TO 80 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.

DEO ATTACHED

RELEASED

2015 MAR 18

RELEASED

2015 MAR 18

UNDER REVIEW

15/1/15
15/1/15
15/1/15

A	NEW ISSUE	CP	15.01.21
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	15.01.21		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. D350-748-243
REV. A
SHEET 1 OF 4
SCALE NTS

CROSS TUBE (AS 350/355 HI AFT)

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Entered: _____ Date: _____



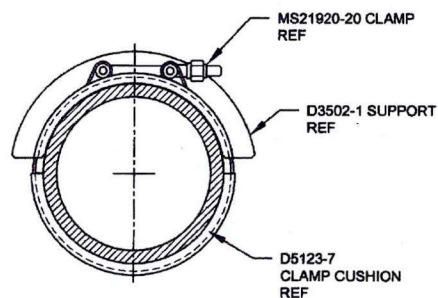
WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor		
			QC / QA Coordinator		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details: _____					

**D350-748-243
ASSEMBLY DETAIL**



SECTION A-A D4-2
SCALE 6X

INSTALL THIS SIDE ONLY, AFTER FINISH:
AETC-1032 INSERT
NAS1149C0363R WASHER
NAS1635-3-8 SCREW

14 15
D3502-1 SUPPORT
MS21920-20 CLAMP (OR -21/-22)
D5123-7 RUBBER CUSHION
2 PL

D350-748-243
BENT TUBE

DEO ATTACHED

UNDER REVIEW

RELEASED

2015 MAR 18 4P

DESIGN	9P	DART AEROSPACE LTD	
DRAWN	9P	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A.P.	DRAWING NO.	REV. A
MFG. APPR.	7/1/22	D350-748-243	SHEET 2 OF 4
APPROVED	7/1/22	TITLE	SCALE
DE APPR.	7/1/22	CROSSTUBE (AS 350/355 HI AFT)	NTS
DATE	15.01.21	COPYRIGHT © 2015 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

Entered: _____ Date: _____

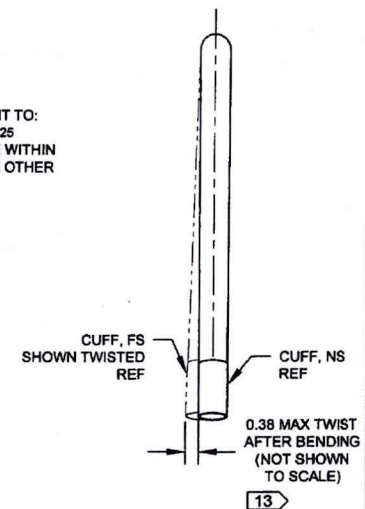
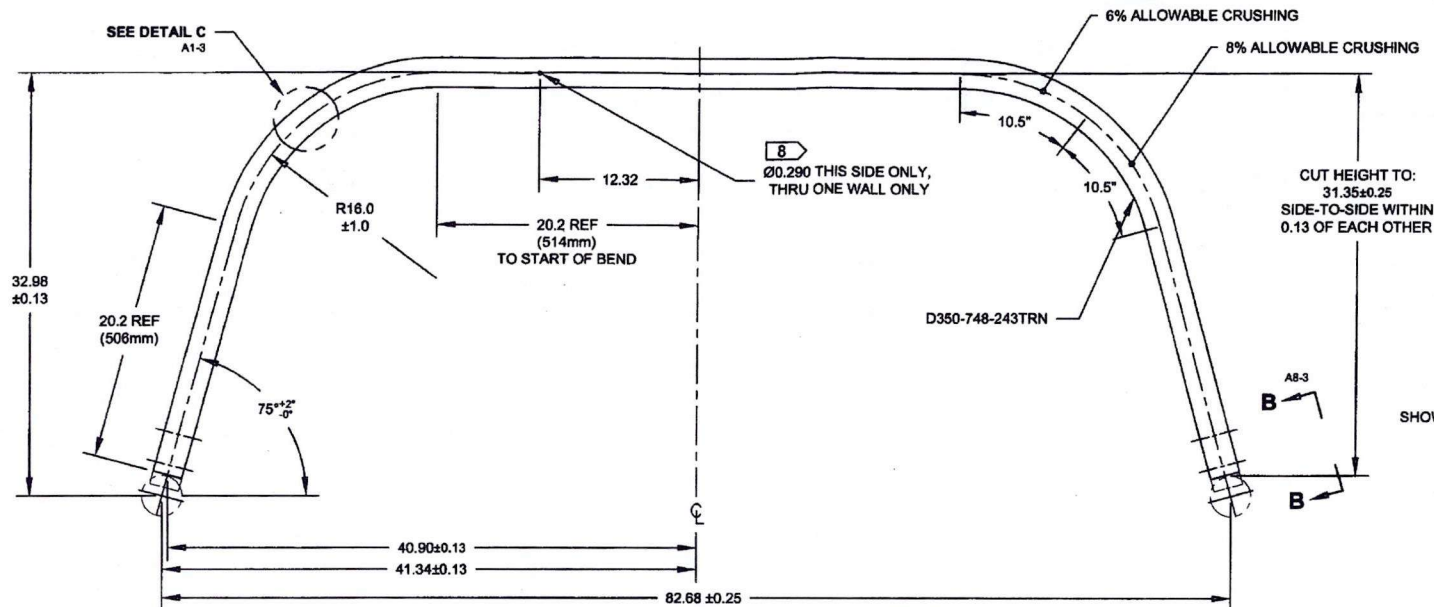


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

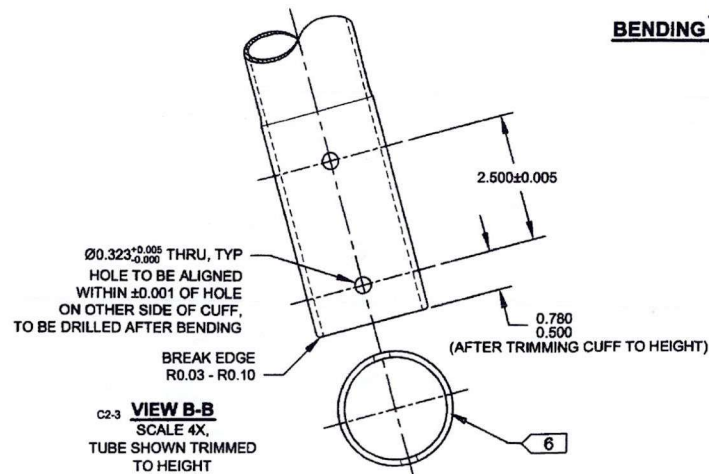
NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor		
			QC / QA Coordinator		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



**D350-748-243
BENDING AND DRILLING DETAIL 11**

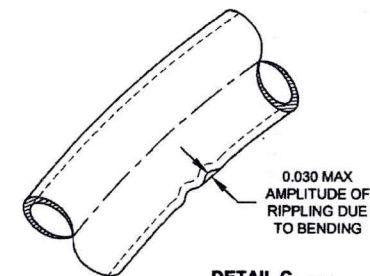


**DEO ATTACHED
RELEASED**

2015 MAR 18 up

UNDER REVIEW

up 15/1/21 OK 9/6/21



DETAIL C D7-3
SCALE 4X
RIPPING EXAGGERATED

DESIGN	40	DART AEROSPACE LTD	
DRAWN	40	HAWKESBURY, ONTARIO, CANADA	
CHECKED	A.P.	DRAWING NO.	REV. A
MFG. APPR.	<i>[Signature]</i>	D350-748-243	SHEET 3 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	CROSSTUBE (AS 350/355 HI AFT)	NTS
DATE	15.01.21	COPYRIGHT ©2016 BY DART AEROSPACE LTD	
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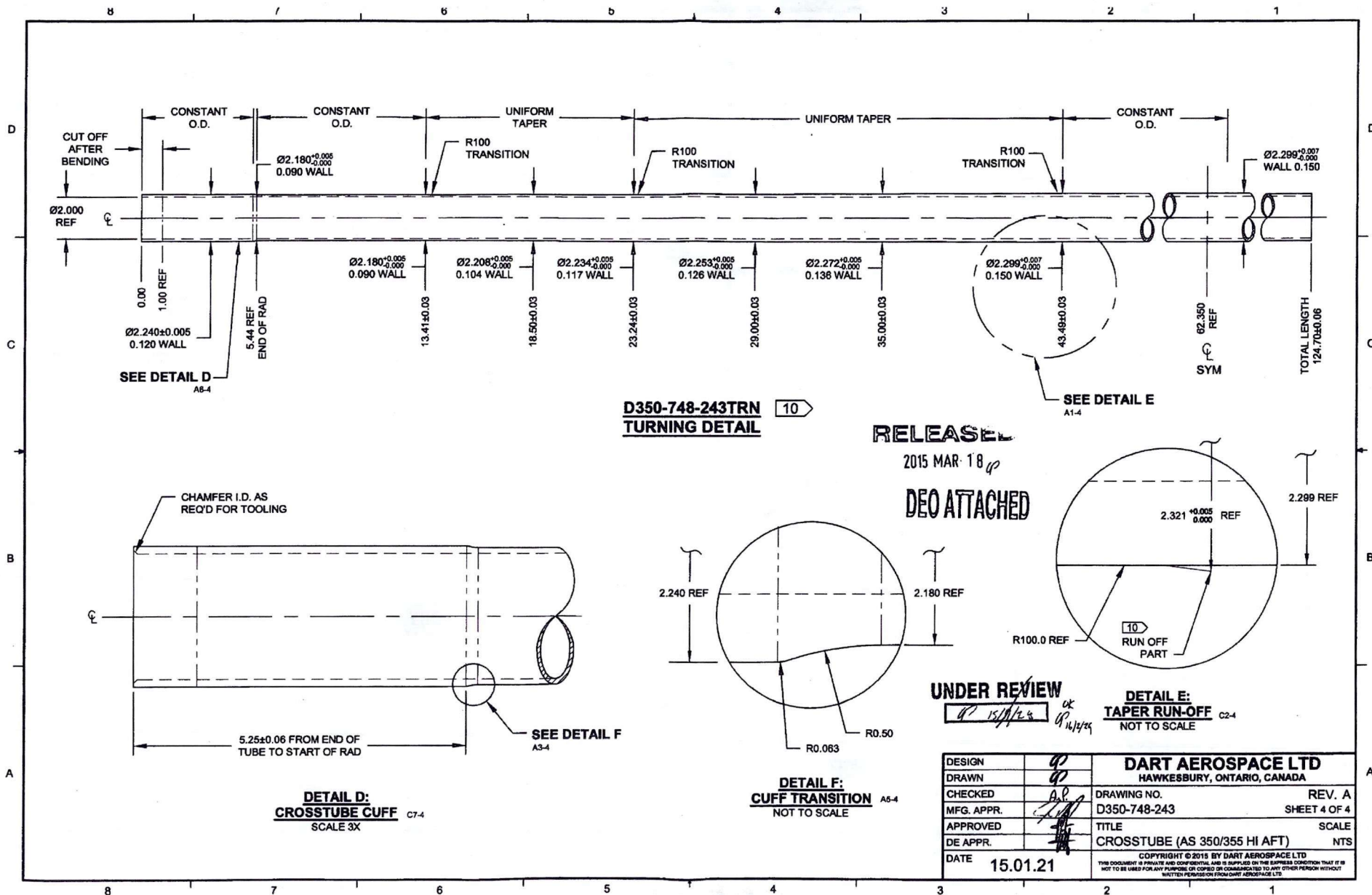


WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor		
			QC / QA Coordinator		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
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Description Work Order Deviation			Disposition		
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Other/Details:					

DRAWING NO. D350-748-243	TITLE CROSSTUBE	REV. A	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D350-748-243-A-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>q</i>	CHECKED <i>ASS</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>		DE APPR. <i>[Signature]</i>		
DATE 15.11.18	DATE 15.11.18	DATE 16.02.19	DATE FEB 19 2016		DATE 2016.02.19		

AMEND NOTE 2 (SHEET 1) AS FOLLOWS:

- 2) FINISH: PREPARE SURFACE PER DART QSI 005 4.1.4
 PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
 PAINT OUTSIDE PER DART QSI 005 4.2
 OR
 POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3

RELEASED
 2016-02-26
EN 16-534 *[Signature]*

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WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier Quality ☐			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition			Completed By
					Lead hand / Supervisor
					QC / QA Coordinator
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details: _____					



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB043592



Supplier: SKY002-VC
Skyservice
6120 Midfield Road
Mississauga
ON
L5P 1B1 Canada
Phone: 905-678-5636
Fax: 905-678-5841

Attention: Jenne, Heather

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB043592

PO Date: 5/30/19

Due Date: 5/30/19

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Phone:

Via: Ground

Pynt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	194991	D212-664-101	Fwd Crosstube - High : TC STC SH01-9 Issue 3, FAA STC SR01298NY 09/01/08, EASA STC EASA.IM.R.S.01304 07/03/06, DGAC MEXICO STC IA-316/2015 15/06/17 *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Liquid Penetrant Inspection as per QSI 038 LPI as per ASTM 1417 Level 2 Attach copy of NDT results to work order	Firmed	-	5/30/19	1 pcs	0 pcs	1 pcs	\$115.00/pcs	\$115.00
	194988		IX JUN 03 2019	Firmed	-	5/30/19	1 pcs	0 pcs	1 pcs	\$115.00/pcs	\$115.00
	194989		IX JUN 03 2019	Firmed	-	5/30/19	1 pcs	0 pcs	1 pcs	\$115.00/pcs	\$115.00
	194990		IX JUN 03 2019	Firmed	-	5/30/19	1 pcs	0 pcs	1 pcs	\$115.00/pcs	\$115.00
Sub Total:							4	0	4		\$460.00

2	191000	D350-748-103	AS350 / AS355 Stainless Steel Fwd Crosstube : TC STC SH06-27 Issue 2, FAA STC SR02359NY 11/03/04, EASA STC EASA.10016903 Revision 2 10/09/03, BRAZIL 2009S04-04 09/04/06 ISSUE P/O TO SKY SERVICE:	Firmed	-	5/30/19	1 pcs	0 pcs	1 pcs	\$115.00/pcs	\$115.00
	191080		IX JUN 03 2019	Firmed	-	5/30/19	1 pcs	0 pcs	1 pcs	\$115.00/pcs	\$115.00
	190999		IX JUN 03 2019	Firmed	-	5/30/19	1 pcs	0 pcs	1 pcs	\$115.00/pcs	\$115.00
	191081		IX JUN 03 2019	Firmed	-	5/30/19	1 pcs	0 pcs	1 pcs	\$115.00/pcs	\$115.00
Sub Total:							4	0	4		\$460.00



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB043592



Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
3	193226	D350-748-203	AS350 / AS355 Stainless Steel Aft Crosstube : TC STC SH06-27 Issue 2, FAA STC SR02359NY 11/03/04, EASA STC EASA.10016903 Revision 2 10/09/03, BRAZIL 2009S04-04 09/04/06 ISSUE P/O TO SKY SERVICE:	Firmed	-	5/30/19	1 pcs	0 pcs	1 pcs	\$115.00/pcs	\$115.00
	191001		1X JUN 0 3 2019	Firmed	-	5/30/19	1 pcs	0 pcs	1 pcs	\$115.00/pcs	\$115.00
	191002		1X JUN 0 3 2019	Firmed	-	5/30/19	1 pcs	0 pcs	1 pcs	\$115.00/pcs	\$115.00
Sub Total:							3	0	3		\$345.00

Grand Total: \$1,265.00

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 6/3/19 8:15 AM Dart.Guerin.Kimberley

DAS
68
9-89

**skyservice****Work Order Traveler**
Sky Service F.B.O. Inc.

10105 Ryan Avenue, Dorval, Quebec, H9P 1A2

TCCA AMO 53-89 / EASA 145.7142 / BDA AMO 385

WO #: MWO40600	Customer: Dart Aerospace Ltd.	Dept: NDT YUL	Reference: POHB043592 ✓
Descr:	PN:	S/N:	Qty: 1
Make:	Model:	Reg:	A/C S/N:
TSN:	CSN:	TSO:	
Task: UNSCHEDULED			Sequence: 1

Work Required:**CARRY OUT NDT INSPECTION (LIQUID PENETRANT) ON 11 CROSSTUBES**

ITEM ID: D350-748-203 AS350/AS355 STAINLESS STEEL AFT CROSSTUBE

- 1 - WORK ORDER ID#: 191002 ✓ DAS
- 2 - WORK ORDER ID#: 191001 ✓ 68
- 3 - WORK ORDER ID#: 193226 ✓ 9-89

ITEM ID: D350-748-103 AS350/AS355 STAINLESS STEEL FWD CROSSTUBE

- 4 - WORK ORDER ID#: 190999 ✓
- 5 - WORK ORDER ID#: 191081 ✓
- 6 - WORK ORDER ID#: 191000 ✓
- 7 - WORK ORDER ID#: 191080 ✓

ITEM ID: D212-664-101 FWD CROSSTUBE - HGH

- 8 - WORK ORDER ID#: 194991 ✓
- 9 - WORK ORDER ID#: 194990 ✓
- 10 - WORK ORDER ID#: 194989 ✓
- 11 - WORK ORDER ID#: 194988 ✓

RECEIVED

JUN 03 2019

DART AEROSPACE LTD.

Action Taken:		Date:	Initial/Stamp:		
LIQUID PENETRANT INSPECTION CARRIED OUT ON ITEMS LISTED ABOVE (ITEMS 1-11) AS PER ASTM1417M-16		30 MAY 2019	DOT-APP 61 53-89		
NO CRACK FOUND					
PEN ZL-37, MPO23206, CLEANER SKC-S MPO15030, EMU. MPO15896, DEV. MPO23451, UV LIGHT M-20142					
<i>Description</i>	<i>Location P/N</i>	<i>Qty</i>	<i>Batch</i>	<i>S/N Off</i>	<i>S/N On</i>
- N/A -					

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature:	ACA/SCA Stamp DOT-APP 61 53-89	Date:
Name: ANTONINO MARCHETTA		

4.0 WEIGHT AND BALANCE

The following weight and balance information is for Dart crosstube installations only. This data should be similar to the existing installation. Differences from the parts removed are the responsibility of the installer.

DART CROSSTUBE	FWD/ AFT	WEIGHT	STA	MOMENT
D350-748-101 D350-748-103	Fwd	35.2 lb (16.0 kg)	106.3 in (2.70 m)	3742 lb-in (43.2 kg-m)
D350-748-201 D350-748-203	Aft	34.7 lb (15.7 kg)	162.4 in (4.12 m)	5635 lb-in (64.7 kg-m)

5.0 PARTS LIST

Qty -101	Qty -103	Qty -201	Qty -203	Part Number	Description
X				D350-748-101	CROSSTUBE INSTALLATION, AS 350/355 HIGH FWD
	X			D350-748-103	CROSSTUBE INSTALLATION, AS 350/355 HIGH FWD (SS)
		X		D350-748-201	CROSSTUBE INSTALLATION, AS 350/355 HIGH AFT
			X	D350-748-203	CROSSTUBE INSTALLATION, AS 350/355 HIGH AFT (SS)
1				D350-748-141	CROSSTUBE ASSEMBLY, AS 350/355 HIGH FWD
	1			D350-748-143	CROSSTUBE ASSEMBLY, AS 350/355 HIGH FWD (SS)
		1		D350-748-241	CROSSTUBE ASSEMBLY, AS 350/355 HIGH AFT
			1	D350-748-243	CROSSTUBE ASSEMBLY, AS 350/355 HIGH AFT (SS)
*2	*2	*2	*2	D3502-1	SUPPORT
*2	*2	*2	*2	D5123-7	CLAMP CUSHION
*1		*1		AELS-1032-225	INSERT
	*1		*1	AETC-1032	INSERT
*2	*2	*2	*2	MS21920-20	CLAMP (OR MS21920-21/-22)
*1		*1		MS27039-1-10	SCREW
	*1		*1	NAS1685-3-8	SCREW (OR MS51958-63)
*1		*1		NAS1149D0363J	WASHER (OR AN960JD10)
	*1		*1	NAS1149C0363R	WASHER (OR AN960C10)
4	4	4	4	D3500-1	SADDLE
16	16	16	16	D3501-1	BUSHING
16	16	16	16	AN4-6A	BOLT
8	8	8	8	AN4-41A	BOLT
4	4	4	4	AN5-32A	BOLT
32	32	32	32	NAS1149D0463J	WASHER (OR AN960JD416)
8	8	8	8	NAS1149D0563J	WASHER (OR AN960JD516)
24	24	24	24	MS21042L4	NUT (OR MS21042-4)
4	4	4	4	MS21042L5	NUT (OR MS21042-5)

* REFERENCE ONLY. PARTS ARE INCLUDED IN D350-748-141/-143/-241/-243 ASSEMBLIES ABOVE

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Revision: C

Date: 15.02.25